

# MSC Guidelines for Review of Structural, General Arrangements, and Structural Fire Protection Plans for Barges Inspected under Subchapter I

Procedure Number: T1-9

Revision Date: 01/19/00

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## References

- a. 1991 Rules for Building and Classing Steel Barges
  - b. 1995 Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways
  - c. 46 CFR Subchapter I
  - d. 46 CFR Subchapter C
  - e. 46 USC 3302 (m): Exemption from inspection of seagoing barges
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## Disclaimer

These guidelines were developed by the Marine Safety Center staff as an aid in the preparation and review of vessel plans and submissions. They were developed to supplement existing guidance. They are not intended to substitute or replace laws, regulations, or other official Coast Guard policy documents. The responsibility to demonstrate compliance with all applicable laws and regulations still rests with the plan submitter. The Coast Guard and the U. S. Department of Transportation expressly disclaim liability resulting from the use of this document.

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## Contact Information

If you have any questions or comments concerning this document, please contact the Marine Safety Center by e-mail or phone. Please refer to the Procedure Number: **T1-9**

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## General Review Guidance

Note: This guidance only applies to **inspected** U.S. flagged barges.

Per reference (e), the barge is considered **uninspected** (reference (d) applies) if the following criteria is met:

- a. Barge is unmanned
  - b. Barge does not carry hazardous material as cargo
  - c. Barge does not carry flammable or combustible liquid, including oil, in excess of 250 barrels.
- ❑ If the barge meets all three criteria then no plan review is required under this guidance. Please refer to the MSC Guideline for Review of Deck Barge Stability for guidance on issuing the required stability letter.
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- ❑ If the vessel is new and not a sister vessel, has the Application for Inspection been submitted? In general, no plan review will occur until receipt of a copy of the Application.
- ❑ Is it clearly stated what is desired from the MSC? Are all plans requiring Coast Guard review and/or approval submitted in triplicate? Are there any special or unusual requests involved?
- ❑ Are the plans being reviewed under NVIC 10-82? If **Yes**, then MSC review of structure and structural fire protection plans is not be required. Note: The general arrangement plans and any other plans not reviewed by ABS under NVIC 10-82 shall be reviewed and approved by the MSC.
- ❑ Is the barge being classed by ABS? If **Yes**, check file for ABS letter/drawings or request from submitter/ABS. Per 91.55-1(b), (c), and 92.01-10, USCG considers ABS structural review for class as acceptable for showing compliance with US regulations for hull structure.
- ❑ Is the vessel carrying a limited quantity (20% or less of deadweight tonnage) of flammable or combustible liquid cargo in bulk? If so, then the portion of the vessel used for that carriage shall also be reviewed to meet the requirements of 46 CFR Subchapter D – Tank Vessels.
- ❑ Is the vessel carrying more than a limited quantity? If so, then the vessel shall be reviewed under Subchapter D as a tank vessel.

- **Verify Structural Fire Protection applicability, 92.07-1.** Is the vessel over 4,000 gross tons and was it contracted for on or after January 1, 1962? Is the vessel an industrial vessel (pipe-lay barge/derrick barge) of 300 gross tons and over but less than 4,000 gross tons and carrying more than 12 industrial personnel contracted for on or after July 1, 1968? If the answer to either of these questions is yes, then the following criteria apply:

- |          |   |
|----------|---|
| 92.07-10 | Construction  |
|          | (a) steel construction                                      |
|          | (b) “A” class bulkheads                                     |
|          | (c) boundary bhds   |
|          | (d)(1)-(3) corridor bulkheads, staintowers, other bulkheads |
|          | (d)(5)&(6) stairs and deck coverings                        |
|          | (d)(7)-(9) ceilings/sheathing/veneer/misc.                  |
|          | (e)-(g) materials/control spaces, if applicable             |

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- **Verify applicability in 92.10-1 and 92.20-1 for respective requirements:**

|                |  |
|----------------|--|
| 92.10-5/10     | Two Means of Escape/Location                         |
| 92.10-15       | Vertical ladders                                     |
| 92.10-20       | No means for locking doors                           |
| 92.10-25       | Stairway size  |
| 92.10-30       | Dead end corridors                                   |
| 92.10-35/40    | Public Space/Access to Lifeboats                     |
| 92.15-5 & -10  | Ventilation requirements                             |
| 92.15-15       | Ventilation for crew quarters                        |
| 92.20-10,15,20 | Locations, construction, and sleeping accommodations |
| 92.20-25       | Washrooms and toilet rooms                           |
| 92.20-30       | Messrooms  |
| 92.20-35       | Hospital space, if required                          |
| 92.20-40       | Other spaces   |
| 92.25          | Rails and guards                                     |

- ❑ For barges intended for service on ocean, Great Lakes, and coastwise routes, check and verify compliance with ABS Rules (ref. (a)): (Exposed & Partially Protected Waters)
  - ❑ Calculate the vessel definitions: Section 2.
  - ❑ Verify longitudinal strength calculations: Section 4.
  - ❑ Verify shell plating scantlings: Section 5.
  - ❑ If manned, check safety requirements: Section 19.
  - ❑ Verify scantlings for decks: Section 6.
  - ❑ Verify scantlings for main framing, as applicable: Section 7.
  - ❑ Verify location and scantlings for watertight bulkheads: Section 9.
  - ❑ Check scantlings in fore end: Section 8.
  - ❑ Check scantlings of tank bulkheads: Section 10.
  - ❑ Check arrangements and scantlings of superstructures and deckhouses: Section 13.
  - ❑ If applicable, verify compliance with helicopter facilities: Section 14.
- ❑ For barges intended for service on rivers, lakes, bays, and sounds, check and verify compliance with ABS Rules (ref. (b)): (Protected Waters)
  - ❑ Calculate the vessel definitions: Part 3, Section 1.
  - ❑ Verify structural arrangement: Part 3, Section 4.3.
  - ❑ Verify longitudinal strength calculations: Part 3, Section 4.4.

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- ❑ Verify shell plating scantlings: Part 3, Section 4.15.
  - ❑ Verify scantlings for decks: Part 3, Section 4.5.
  - ❑ Verify scantlings for main framing: Part 3, Section 4.7.
  - ❑ Verify location and scantlings for watertight bulkheads: Part 3, Section 4.13.
  - ❑ Verify scantlings for chords and stanchions: Part 3, Section 4.9.
  - ❑ Verify scantlings for web frames, stringers, and girders: Part 3, Section 4.11.
  - ❑ Verify scantlings for inner bottoms, hatches, and fittings: Part 3, Section 4.17.
  - ❑ Check for barge reinforcement: Part 3, Section 4.19.
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## Definitions:

### Routes:

|                          |                 |
|--------------------------|-----------------|
| Rivers:                  | 46 CFR 90.10-33 |
| Lakes, Bays, and Sounds: | 46 CFR 90.10-19 |
| Great Lakes:             | 46 CFR 90.10-13 |
| Ocean:                   | 46 CFR 90.10-25 |
| Coastwise:               | 46 CFR 90.10-11 |

### Stability related route terms:

|                             |                   |
|-----------------------------|-------------------|
| Exposed Waters:             | 46 CFR 170.050(c) |
| Partially Protected Waters: | 46 CFR 170.050(i) |
| Protected Waters:           | 46 CFR 170.050(j) |